

Troublesome Knowledge, Troubling Experience: An Inquiry into Faculty Learning in Service-Learning

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In this article we share the theoretical framework of threshold concepts—concepts on which deep understanding of a field of practice and inquiry hinges and which, once understood and internalized, open a doorway to otherwise inaccessible ways of thinking—and explore its relevance to learning how to teach, learn, serve, partner, and generate knowledge through service-learning. We extend the focus of work on threshold concepts beyond student disciplinary learning to faculty pedagogical learning, in particular to learning about service-learning; and we contribute to theory on how threshold concepts are learned by developing the idea of threshold experiences—reflective encounters with dissonance that give rise to deeper understanding and sometimes internalization of threshold concepts. In line with the exploratory nature of this piece, we use an example of an instructor learning a threshold concept in service-learning through a threshold experience to ground our extension of current work on threshold concepts, our consideration of implications, and our identification of questions for ongoing inquiry. Examining faculty learning through the lens of threshold concepts and threshold experiences can help us understand, address, and embrace dissonance-related challenges and opportunities involved in learning the why's and how's of service-learning pedagogy.

Dewey (1933, in Hickman & Alexander, 1998) theorized about the role of a “troubled, perplexed, trying situation” (p. 140) as an essential part of inquiry and learning and thereby informed understanding of the power of service-learning and how it needs to be designed to realize that potential: Service-learning presents students with experiences of dissonance by putting them into complex roles in unfamiliar and often challenging situations, and critical reflection on those experiences enables them to test and refine their knowledge and skills, to pose and examine new questions, and to learn about themselves as learners. Do faculty practitioners of service-learning not have “troubled” and “trying” experiences of dissonance in using this pedagogy, perhaps especially at moments of significant transition in pedagogical practice? What might examining those experiences of dissonance reveal about what faculty¹ need to learn to undertake service-learning effectively and about how that learning might proceed?

Our exploration of this question in this essay responds to two recent calls: (a) to bring theory from cognate areas into service-learning to help advance research and practice (Bringle, Clayton, & Hatcher, 2013) and (b) to advance inquiry into faculty learning by asking: “How do and might faculty use what they know about student learning to conceptualize, generate, and investigate their own learning?” (Clayton, Hess, Jaeger, Jameson, & McGuire, 2013, p. 268). Specifically, we examine the relevance of

work on threshold concepts in student disciplinary learning to faculty learning about service-learning.

Meyer and Land (2003, 2005) coined the term *threshold concepts* to refer to those concepts on which deep understanding of a field of practice and inquiry hinges and which, once understood, open a doorway to otherwise inaccessible ways of thinking. Often “troublesome,” because they challenge previous understanding, threshold concepts are generally learned in the dissonance-filled context of liminality, “a state in which [we] realize that the ways [we] have seen things up to now are no longer sufficient and there are other ways to see things that [we] have not encountered yet” (Land, 2011a).

Although developed in the context of student learning within the disciplines, theory on threshold concepts is also being applied to faculty as learners of innovative pedagogies (e.g., Bunnell & Bernstein, 2012; King & Felten, 2012a). This development bodes well for advancing understanding of faculty learning about service-learning. Community engagement scholar O'Meara (2013) suggests that “the topic of [faculty] professional growth, including the specific dimension of learning, [has] been understudied” (p. 227) and that “research to date has not been rich in the use of theory” (p. 237). Further, Neumann (2005) points to the need to better understand why and how faculty teaching practices change over time, and Clayton and colleagues (2013) claim that such understanding is “especially important in

service learning because implementation of the initially unfamiliar pedagogy ... evolves and improves while keeping us continually on a learning edge" (p. 248). This article offers one foundation for just such inquiry into faculty learning.

Our purpose in this article is to contribute to the development of theory on how threshold concepts are learned, in particular, how they are learned by faculty in the context of service-learning. We share the theoretical framework of threshold concepts and explore its relevance, asking: What aspects of service-learning might function as threshold concepts for those learning to teach, learn, serve, partner, and generate knowledge through the process? Although, as we understand it, all partners in service-learning are learners and the learning of any one partner is intertwined with the learning of the others, we focus here on faculty learning as a next step in ongoing inquiry into such co-learning. We contribute to ongoing development of theory on how threshold concepts are learned by positing what might be considered *threshold experiences*—reflective encounters with dissonance that give rise to deeper understanding of threshold concepts.

As noted by Harrison and Clayton (2012), knowing more about how the threshold concepts in service-learning are learned would be valuable to faculty developers and others looking to support faculty in learning the pedagogy as well as to instructors themselves. Since by its nature it problematizes the norms of more traditional strategies, service-learning involves transformations in perspective, practice, and identity similar to those associated with students learning threshold concepts in the disciplines. Integrating work in service-learning with work on threshold concepts, therefore, can inform service-learning practice and scholarship as well as ongoing development of theory on threshold concepts; of particular interest here, doing so can help us better understand challenges faculty (and all partners) face in learning the pedagogy. What, then, results when we bring together what is known about learning threshold concepts with what we know about learning in service-learning?

We begin with an overview of threshold concepts and then consider the relevance of this theory to faculty learning about service-learning. We ground this application of the theory in an example of faculty learning through critical reflection on moments of dissonance in teaching with service-learning, which we then further use as we explore the notion of threshold experiences. We conclude by considering a variety of implications and proposing questions for further inquiry.

Threshold Concepts

Work on threshold concepts provides a pathway to deepen our knowledge about how learning occurs.

The theory on threshold concepts originated in a project in the United Kingdom focusing on "identifying factors leading to high quality [undergraduate] learning environments within [multiple] disciplinary contexts across a range of higher education institutions" (Meyer & Land, 2003, p. 1). Starting with the realization that there are some elements of the curriculum that cause students to see their disciplines in a new light and some that do not, Meyer and Land launched an investigation, still ongoing a decade later, into the nature of what they call threshold concepts.

Threshold concepts are the foundational elements or "jewels in the curriculum" (Land, Cousin, Meyer, & Davies, 2005, p. 57) that, once grasped, lead to a significantly different understanding of a subject (Cousin, 2009; Land et al.; Meyer & Land, 2003). Meyer and Land distinguish between concepts that are "core" to a discipline and those that are "threshold"; the former are building blocks that advance understanding but do not "lead to a qualitatively different view of subject matter," and the latter are concepts that cause a profound shift in one's understanding of the subject and one's relationship to the discipline (Meyer & Land, 2003 p. 4). As an example, students of history need to learn the core concept that history is "recorded" in verbal as well as written forms; in order to progress in the discipline to the point of thinking like historians, however, they also have to learn the threshold concept that history is often "written" by the "winners" (i.e., that historical documents convey particular perspectives, often those of individuals and institutions with power). Providing an example of a threshold concept from their research, Meyer and Land (2005) note that students learning mathematics must move beyond the everyday understanding of a "limit" as a barrier that, when reached, stops further progress and come to understand it, rather counter-intuitively, in almost completely opposite terms as being ever more closely approached but never actually reached. Such concepts are referred to as threshold concepts because, as Land (2011a), explains, "if we [understood them] different things would come into view, and we would have a different perspective ... but there is a space between [that understanding and where we currently are] where we have to integrate new things and let go of old things." He and his colleagues use the image of light coming through a doorway or portal, which gives a sense of both where we are now and the "space that is glimpsed but yet untraveled" (Land, 2011a) beyond the portal to describe the metaphorical threshold nature of these concepts.

Threshold concepts are said to have several features common across disciplines and contexts (Cousin, 2006; Land, 2011b; Land et al., 2005; Meyer & Land, 2003, 2005), with the following six

characteristics central in the literature:

(a) *Troublesome*. Threshold concepts are often troublesome, in part because they involve moving from the familiar to the unfamiliar, requiring “letting go” of previously held beliefs (Land et al., 2005, p. 54).

(b) *Transformative*. Understanding a threshold concept leads to a “transformed internal view of subject matter, subject landscape, or even world view” (Meyer & Land, 2003, p. 1) and to “cognitive, epistemic, discursive and ontological shifts in the learner” (Meyer, 2012, p. 8). The transformation can be sudden or “protracted over a considerable period of time” (Land, Meyer, & Baillie, 2010, p. x) and can involve changes in one's values, beliefs, attitudes, and identity.

(c) *Integrative*. Once a threshold concept is understood learners come to see its interrelatedness with other concepts, recognizing connections within and between subjects where they previously had seen only disconnected fragments and thereby taking a more integrated approach to analyzing and using disciplinary subject matter.

(d) *Irreversible*. “Unlearning” a threshold concept is highly unlikely. This irreversibility means that knowledge of and ability to apply threshold concepts tend to become second-nature once the concepts have been learned, making it difficult to comprehend that someone else (e.g., our students) would have trouble understanding them.

(e) *Discursive*. Learning a threshold concept has a discursive dimension in that one comes to express oneself in ways typical of the discipline within which the concept resides. Understanding threshold concepts is key to students coming to think from the perspective of their discipline (e.g., learning to think like historians or economists).

(f) *Reconstitutive*. The learner's identity changes—as is reconstituted—as a result of learning a threshold concept, often aligning more closely with that of professionals or scholars in the field.

The work on threshold concepts in disciplinary knowledge has been well received by the broader academic community (Barradell, 2012; Land et al., 2010; Schwartzman, 2010), leading to the application and further development of the theory in a wide range of disciplines. Land (2011b) notes that there is now much empirical support for threshold concepts in student learning and points to international scholarly work in “80 disciplinary or subject contexts” in higher education (p. 177).

Threshold Concepts in Learning about Service-Learning

Extension of the work on threshold concepts to include faculty members' pedagogical learning (Bunnell & Bernstein, 2012; King & Felten, 2012a;

Wilcox & Leger, 2013) sheds light on the difficulties experienced by instructors as they navigate transitions in their understanding of and approaches to service-learning (Harrison & Clayton, 2012). Recalling the distinction between core and threshold concepts noted above, not everything that must be learned about the pedagogy is a threshold concept. However, if there are such concepts associated with understanding and enacting its defining dynamics well, framing them as such can help us understand, address, and embrace dissonance-related difficulties faculty may face in learning the why's and how's of the pedagogy. The question we consider in this section, then, is: What is it about service-learning that might function as threshold concepts for faculty (and others) who are learning to undertake it meaningfully?

Speaking at a fall 2011 conference on threshold concepts at Elon University, Land joined faculty, staff, administrators, and higher education consultants in a concurrent session focused on the application of this work to learning nontraditional pedagogies. Working with service-learning as an example, the group explored the difficulties faculty face when, in the words of one participant, “they leave the lecture method behind and take on different roles, which have associated shifts in power, identity, and authority.” Participants emphasized that service-learning “challenges faculty with radically nontraditional conceptions of what a course is, how it should be organized and structured, and what is and is not supposed to happen in it” in much the same way that it challenges students. They suggested that the very concept of *service-learning* itself may function as a threshold concept, with partners needing to cross a threshold to truly grasp how it differs from volunteerism and from other forms of experiential learning.

The struggle many face in distinguishing service-learning from volunteerism or community service and from internships, practica, and other forms of community-based experiential education frequently emerges in the service-learning literature (see, for example, Furco, 1996; Howard, 2001) and in our own experience as faculty developers. Unlike service-learning, these other activities do not, by definition, emphasize “working with, not just in, the community” and “building on assets rather than deficits” or necessarily have “a commitment to learning and change among all participants, not just students” (Bringle & Clayton, 2012, pp. 111,104). Looking to the distinctive features of threshold concepts indicated earlier, we note that this understanding of service-learning as *community-engaged* and, therefore, distinct from these other *community-based* activities is often *troublesome* in that it problematizes the defaults to compartmentalized and hierarchical roles of teacher, learner, server, and served that characterize

many pedagogies as well as traditional forms of service. It is, relatedly, *transformative* and *reconstitutive* in that its de-centering of academic expertise and its sharing of authority, control, and responsibility in knowledge production involve shifts in identity and epistemology among students, faculty, and community members as they move beyond traditional, hierarchical roles and learn to function as full partners in processes of inquiry and change agency. This shift in understanding service-learning as distinct from community-based pedagogies and other forms of experiential education is also *discursive* in that the language of “volunteerism” is often a primary indicator of whether this threshold concept has been learned. Understanding service-learning as such—not as volunteerism, for example—is necessarily *integrative* of the concepts of service and of learning as well as of the associated activities (e.g., experience and reflection) and domains of learning (e.g., academic and civic learning). Once this understanding has been achieved, the difference is not a matter of remembering facts but rather of a fundamental shift in one’s orientation to the work, which is quite likely *irreversible*.

Tilley-Lubbs (2009a, 2009b) offers a concrete example of faculty learning about one of the foundational—and, we suggest, threshold—concepts in learning to teach, learn, serve, partner, and generate knowledge through service-learning: reciprocity. She uses the method of autoethnography, which may, as in this case, involve “retrospectively and selectively [writing] about epiphanies” (Ellis, Adams, & Bochner, 2011, para. 3), to inquire into shifts in her own understanding of the concept. In the vignette that follows, she draws from two previously published reflective pieces (Tilley-Lubbs, 2009a, 2009b) documenting what she frames as a “journey that changed [her] from enacting a deficit notion of the community” (2009a, p. 64).

[The service-learning project in my course ‘Crossing the Border’ provided] a setting for reciprocal opportunities for [immigrant] women to learn to speak English and navigate in a new culture and for students to practice spoken Spanish and experience Mexican and Honduran cultures.... This simplistic view of reciprocity initially guided the course....

Early in the morning on the second Saturday of [the] semester, the students arrived at my garage to sort mounds of donated clothing and furniture to deliver to their partner families. Once everything was bagged and ready to go, we loaded cars, vans, and trucks for our cross-city trek to the families’ homes....

In the class following the workday, student criticism raised questions regarding the appropriateness of “cramming a bunch of university stu-

dents” into people’s private spaces ... which Bill called “tourism of the marginalized”... [Liz] stated that she felt quite uncomfortable with my picture taking as if the families were exhibits. I never had thought along those lines; I simply wanted to create archives for the class....

[This was] the first time class members critically questioned my practices.... I felt as if I had been pushed into a “disturbingly vulnerable place where I was forced to confront my ineptitude” (Vacarr, 2001, p. 286).... I was unable to move away from my disequilibrium to create a teaching moment. At that point, I subconsciously began to confront my motives, but I chose to remain cloaked in denial and irritation, unable to acknowledge the situation I had created. I opted ... to maintain the “all-powerful Super Teacher” (p. 290) stance....

Up to that point, my vision included facilitating a class to foster change within students, causing them to become agents of change in society. I never once considered they could serve as agents of change for me through what I perceived at the time to be probing, hurtful criticisms and accusations directed toward me ... I allowed my irritation to interfere, so that I did not realize at that time that [the students] had penetrated to the core of the problem with the workday...

Not until I defended my dissertation that included [their and my] reflection[s] did I come to terms with the inappropriateness of my actions. Two committee members ... questioned the practice of the workday ... [one of them asking], “Do you realize that you are setting up a situation in which all the participants involved will perceive the students as the ‘haves’ and the community members as the ‘have-nots’ of society?” I was so shocked that I could not reply....

If the students had not first caused me to doubt my practice, I might not have been ready to listen when the faculty members made their comments. They said essentially the same things as Bill and Liz, but I did not hear/listen/respond until two professors, representing academic hierarchy, pointed out that my intentions were not congruent with my practice....

To my chagrin, as I revisit this situation, I realize that [I] exemplified hierarchical thinking.... Eby (1998) [cautions that service-learning implemented with] simplistic views of social problems lead[s] to an emphasis on deficiencies in the community, rather than fostering appreciation for their strengths. Although I agreed with Eby’s arguments, only after I began to question my practices did I completely understand his concerns ... By starting the placements with a workday, I was overtly, albeit unconsciously, establishing the students and myself as dominant

members of society and ... developing a deficit notion about the families.... I was creating the situation against which Fine (1998) cautioned—Othering in an attempt to blur Othering....

Looking back ... I am aware of the implicit social hierarchy being established, but at the time ... my only concerns focused on responding to perceived community needs and providing an opportunity for everyone to meet.... I was just doing what I had always done ... The patriarchal society in which I grew up promotes charitable acts as beneficent and virtuous. I am a member of a church that considers service to humankind to be of the highest calling. ... I [am now] appalled to recognize that my entire perspective about the world and the workdays contributed to the oppressive behavior I abhor....

I [now] seek creative ways to involve students with families in empathetic relationships that foster attitudes of concern for social justice and equity not based on deficient notions... If a time comes when economic necessity determines a need for reestablishing the widescale distribution of food and clothes, I will abandon the role of trying to “fix” the situation [and] will invite students and women to come together and discuss the possibilities The bottom line is the imperativeness of involving the women in the process of praxis to transform charity into collaboration....

At the heart of Tilley-Lubbs’s shift in understanding reciprocity, as documented in the vignette above, is the aforementioned distinction between “in” and “for,” on the one hand, and “with” on the other. Her conception of reciprocity is radically transformed from one of mutually beneficial exchange to one of all partners sharing power and responsibility and collectively generating visions of the possible and approaches to achieving it. According to Jameson, Clayton, and Jaeger (2011), such positioning of all partners as co-educators, co-learners, and co-generators of knowledge “require[s] and foster[s] paradigm shift ..., which in turn engender[s] transformation in individual and collective ways of being, knowing, and engaging” (p. 260). Reciprocity, so framed as “thick” (Jameson et al.) or “generative” (Dostilio et al., 2012), therefore, appears to be a threshold concept in service-learning, as learning and undertaking a process of reciprocal collaboration among students, community members, and faculty can evoke the troublesome, transformative, integrative, and reconstitutive nature of such concepts.

Learning a threshold concept—or, having attained “a transformed way of understanding, or interpreting, or viewing something, without which the learner cannot progress” (Land et al., 2010, p. ix)—seems an apt interpretation of the challenges many service-learn-

ing faculty (as well as community members and students) face as they shift from more traditional conceptions and practices of teaching, learning, serving, partnering, and generating knowledge. According to Land thresholds are “not a line to cross” but “a space of transition or transformation” (Land, 2011a). How exactly might such transitions be made? How might we conceptualize how such learning happens?

Learning Threshold Concepts: Threshold Experiences

The characteristics of threshold concepts—troublesome, transformative, integrative, irreversible, discursive, and reconstitutive—generally make such concepts difficult to learn; letting go of prior ways of understanding can be very challenging, confusing, or even threatening (Meyer & Land, 2005). At the same time, developing new ways of understanding can also be a source of energy or excitement (King & Felten, 2012b). Meyer and Land describe the difficulties and possibilities associated with learning threshold concepts in terms of *liminality*. Drawn from Latin, liminality means “within the threshold” (Land et al., 2005, p. 55). Meyer and Land (2006) “borrow the idea of liminality from anthropology (van Gennep (1960) and Turner (1960)), arguing that just as ‘rites of passage’ mark a person’s movement from one status to another (e.g., from boyhood to manhood), so disciplines require learners to enter their communities” [e.g., passing from a student of history to an historian] (Cousin, 2009, p. 204).

Land and colleagues outline a high-level process of moving through liminality and achieving new understanding in what they call their *relational model* (Land et al., 2010, p. xi), which highlights three phases in the journey of coming to learn threshold concepts. In the *preliminal* phase some form of troublesome knowledge “unsettles prior understanding rendering it fluid, and provoking a state of liminality” (Land et al., p. xi).

During the *liminal* phase the learner gives up old conceptions in the course of gaining newly transformed ones, thereby “reconfiguring...the prior conceptual schema” through both ontological and epistemological shifts; this phase is reconstitutive, leading to new understanding and attainment of the threshold concept (Land et al., p. xi). By the *postliminal* phase “both learning and the learner are transformed” (Land et al., p. xi); the change is irreversible, and the learner engages in a broader discourse as a result of the newly gained knowledge or perspective.

Tilley-Lubbs’s struggle with inconsistencies between her beliefs and her practice offers a powerful example of a threshold experience leading to deeper understanding of a threshold concept.

Examining the vignette in light of the relational model, Tilley-Lubbs's preliminal "encounter with troublesome knowledge" (Land et al., p. xii) occurred when the students first questioned the practice of the workday; student concerns with the implementation of service-learning opened up the liminal space. At this stage, however, she had on "blindness" that prevented her from engaging fully with what her students were saying (Tilley-Lubbs, 2009b, p. 77). From beginning to write about the issue with the workday in her teaching journal through being questioned in her dissertation defense, Tilley-Lubbs existed in a liminal state that encompassed "integration, discard[ing], [and] ontological and epistemological shift" (Land et al., p. xii); in this phase she made some changes in practice, including omitting the workday (Tilley-Lubbs, 2009a). Although Tilley-Lubbs's understanding of reciprocity began shifting as a result of reflecting on her students' criticisms of the work day, although she had written about that experience as autoethnography in her dissertation (see Tilley-Lubbs, 2003), and although her professors pointed out that her design had unintentionally reinforced stereotypes, her resistance to the troubling knowledge meant that she did not move into the postliminal phase until she reflected on and analyzed the entire process as meta-[critical]-autoethnography (see Tilley-Lubbs, 2009a, 2009b). She notes that at that later time, she "could step away and 'reflect on [her] actions through the eyes of the other's' actions (Rhoads, 2003, p. 239), acknowledging 'response data' from participants who forced [her] to 'significantly reconstruct [her] interpretation' of [her] actions (St. Pierre, 1997, p. 184)" (Tilley-Lubbs, 2009a, p. 3).

Her journey across the threshold extended over several years, as her reflection on the experience in her course continued and deepened. Tilley-Lubbs describes the entire sequence as one of coming to "*conscientização*" (Freire, 1970, in Tilley-Lubbs, 2009b, p. 69), or critical consciousness, that reconstituted her identity as teacher as she realized the power of the questions from her students and committee members in shifting her perspective and resulting approaches and no longer merely received them as a criticism of her and her course design. Through this process she found her way toward understanding and enacting the partnerships of "thick" reciprocity that better embodied her values and her objectives.

Land and colleagues's (Land et al., 2010) relational model, then, offers as a high-level description of the process of moving through liminality in learning threshold concepts; it does not, however, help to explain conditions under which such learning occurs or shed light on why it does and does not occur. Schwartzman (2010) notes that the characteristics of

threshold concepts and Meyer and Land's use of the journey metaphor "include no information that facilitates supporting a [learner] on the journey" (p. 26); she thus calls for further development of theory on the process of learning threshold concepts as an aid to facilitating teaching them and supporting learners in the associated learning challenges. As a step in this direction, which we believe is particularly significant for faculty learning about service-learning, we suggest that the process of learning threshold concepts is meaningfully conceptualized as a *threshold experience* (a term mentioned but not developed in Land et al., 2010, p. x) and that it necessarily encompasses critical reflection in the context of the counternormative (Clayton & Ash, 2004; Howard, 1998) nature of the service-learning pedagogy.

Given that, by definition, learning a threshold concept entails "a reformulation of the learners' [sic] frame of meaning" (Land et al., p. ix) in the context of liminality, the process of learning often involves an experience of dissonance. Dissonance itself, however, does not generate learning, so more needs to be said. Taking steps in this direction, in their work on threshold concepts, Timmermans (2010) highlights the necessity of the learner becoming aware of the dissonance, and Schwartzman similarly suggests that the learner must "engage with the unknown as unknown" (p. 34). Building on Dewey (1997/1938) and others, work in service-learning confirms that such is the function of critical reflection. Advancing thinking about faculty learning threshold concepts of service-learning through threshold experiences, then, involves harnessing what we know in service-learning about dissonance and about learning through critical reflection on experience; doing so provides another opportunity to transfer theorizing about student learning to faculty learning.

The literature on service-learning recognizes the power of dissonant experiences as troubling and potentially transformative opportunities for learning (see for example, Butin, 2010; Kiely, 2005), with some scholars considering the ways in which learning the pedagogy itself evokes dissonance. For example, just as the threshold concepts literature speaks of "leaving [the] familiar space" in order to embrace the "riskier" unknown on the other side of the threshold (Land et al., 2010, p. ix), Howard (1998) points to the need for participants to "re-norm" as they undertake the "counternormative" pedagogy of service-learning, given the significant ways in which it challenges participants accustomed to traditional, hierarchical, non-experiential teaching and learning processes. Building on this work and speaking explicitly of faculty as well as students, Clayton and Ash (2004) highlight the ways in which the counternormative "messiness and unpredictability, personal and

intellectual risks ..., and shared control and responsibility ... can lead to degrees of dissonance, frustration, and uncertainty” (p. 59).

Warning against a response of “try[ing] to force-fit this new experience into the modes of teaching and learning with which students and faculty alike are apt to be more comfortable” (2004, p. 59), Clayton and Ash posit that the pedagogy’s unfamiliar, disorientating nature unsettles and invites reformulation of perspectives, practices, and identities and thereby contributes to its transformational potential. Clayton and Ash’s work offers a framework for conceptualizing the process of moving through dissonance (or liminality) by documenting some of the shifts in perspective, practice, and identity required for and fostered by engaging with the counternormative nature of the pedagogy. Developing the implications of service-learning’s counternormativity, they explore “how to support students and faculty not only in *managing* the challenges associated with [the dissonance of learning the pedagogy] but also in *utilizing* them intentionally as stimuli” to paradigmatic shifts in understanding and ways of being (p. 60).

Such work in service-learning thus poses an additional possibility for the ongoing development of theory related to how threshold concepts are learned. Many of the threshold concepts identified for various disciplines and pedagogies seem to involve shifts from familiar ways of thinking to unfamiliar ones—from conceptions that are ingrained, socialized defaults to startlingly alternative ones. For our purposes here, perhaps the counternormativity of any given aspect of service-learning, often highlighted by the uncertainty or resistance it evokes, can serve as an indicator that a threshold needs to be or is in the process of being crossed. Perhaps it can cue faculty to the influence of dominant norms on their interpretive frameworks and alert them to the value of seeking out additional information and perspectives on their learning challenges as they adopt the pedagogy and find themselves in liminal spaces.

Speaking to the role of dissonance in learning, Kiely’s (2005) research on international service-learning provides further building blocks to inform development of theory on threshold experiences. Kiely suggests that there is a relationship between the “type, intensity, and duration” of the dissonance and the type of learning that results (p. 15). He posits that high intensity dissonance “leads individuals to rethink existing knowledge” (p. 9) and, further, catalyzes ongoing learning” (p. 8) in that it “become[s] an important part of participants’ frame of reference and continue[s] to influence ... [their] learning and action” (p. 12). Giles (2014), however, finds that the reverse can result, with learners withdrawing from the issues that give rise to their experience of intense

dissonance. Relatedly, participants in a pre-conference workshop on threshold concepts and threshold experiences in all partners’ learning about service-learning at the 2013 conference of the International Association for Research on Service-Learning and Community Engagement argued that it is not the intensity of the dissonance but rather the conditions under which it emerges in the reality of the learner—for example, their previous encounters with similar dissonance, their level of risk tolerance or adversity, the relationships they bring with them into the dissonance—that most determine whether or not it will likely serve as a seedbed for learning. Synthesizing their understanding of the ways in which dissonance is relevant to learning, they suggested that the discomfort induced by dissonance establishes readiness to learn but that this is only useful if the learner moves toward rather than away from her uncertainty and doubt. Dewey (1997/1938) provides a helpful summary, positing that the “value [of an experience] can be judged only on the ground of what it moves toward and into” (p. 38).

Contrary to the pervasive belief that “experience is the best teacher,” then, service-learning practitioner-scholars understand, with Dewey (1997/1938), that meaning must be made of experience through critical reflection. It is worth noting that critical reflection, as distinct from common ways of interpreting the term *reflection* (i.e., as touchy-feely introspection) may well be another threshold concept in service-learning. Shifting from understanding reflection as merely reporting on experience and on the learning that presumably came from it to understanding critical reflection as the component of the pedagogy that generates, deepens, and provides authentic evidence of learning while also improving the quality of practice and partnerships is a necessary step in tapping the learning potential of dissonant experience (Ash & Clayton, 2009). Coming to understand critical reflection in these terms opens up for all partners in service-learning otherwise inaccessible possibilities for making meaning of their work. Community engagement practitioner-scholar Whitney (personal communication, March 2006) suggests that the more developed one’s critical reflection capacities become, the less intense the dissonance needs to be to catalyze one’s learning; more and deeper meaning is achievable through critical reflection on ever smaller and otherwise less consequential moments of disorientation.

Examining Tilley-Lubbs’s journey of learning the threshold concept of reciprocity through multiple layers of experience and progressively deeper reflection and understanding highlights additional possible elements of threshold experiences. Catalysts to and shapers of the journey through a threshold experience may include: (a) integration of perspectives

other than one's own—indeed, having an identity as a co-learner with others may facilitate movement through a threshold experience and (b) incongruence between one's intentions, values, and commitments on the one hand and one's practice on the other. It seems that threshold experiences may involve (a) affective and cognitive dimensions of learning and (b) subconscious and conscious processing of experiences—and it may be that reflection at one level is in tension with reflection at the other.

Implications and Future Directions

One of our primary considerations has been how faculty do or might use what they know about student learning to conceptualize, generate, and investigate their own learning about service-learning. Extending the exploration of threshold concepts, which has focused largely on student disciplinary learning, to faculty learning related to service-learning carries with it various potential limitations. Theory that emerged from examination of student learning in disciplinary contexts may prove problematic when applied to faculty learning in service-learning, given that the latter is interdisciplinary, encompasses a variety of methodological and epistemological approaches, involves partners beyond the university, and taps people and places as “texts”—all of which render it distinct from disciplinary content as a subject of learning and may complicate application of work on threshold concepts. In addition, there is “no consensus...on ...intellectually rigorous, definitive criteria for identifying tc's” (Schwartzman, 2010, p. 40), which leads to variation in the threshold concepts identified by different scholars in the same disciplines (Barradell, 2012) and likely in the identification of such concepts in service-learning; therefore, what we have proposed here as being threshold concepts in service-learning might be contested among the pedagogy's practitioner-scholars. Our discussion here, while informed by multiple faculty threshold experiences, is explicitly grounded in examination of only one, with the result that our inquiry is largely exploratory; systematic inquiry into additional examples, including the threshold experiences of students and community members as well as faculty, is needed to deepen extant theory and its expansion from student disciplinary to faculty pedagogical learning.

Despite these potential limitations, we encourage ongoing expansion of threshold concept theory beyond student disciplinary learning to faculty (and community member) pedagogical learning. Further study of faculty (and all partners') learning about service-learning (and other nontraditional pedagogies) will enhance understanding of the ways in which incorporating the pedagogy in faculty work can prove troublesome and potentially transformative.

Expanding the focus and reach of the theory holds much promise for service-learning practitioner-scholars as we continue to explore how community partners, students, and faculty co-learn. We now consider some implications for practice and research that arise from our exploration of threshold concepts and threshold experiences in the context of faculty learning about service-learning.

Support for Faculty as Learners

Integral to service-learning generally and to using theory on threshold concepts and threshold experiences to inform practice and advance research is the counternormative conviction—which we suggest also may be a threshold concept in service-learning—that *faculty, in their roles as teachers, are learners and co-learners*. As Clayton and colleagues (2013) summarize, in academia faculty are generally seen as the educators, students as the learners, and community partners as the receivers of academic expertise; knowledge is often positioned as flowing one-way, from faculty outwards. Positioning faculty, students, and community partners as co-learners in service-learning shifts these norms, creates opportunities for faculty members to learn with their students and community partners, and draws our attention to the interconnected nature of the learning of all partners. Tilley-Lubbs's learning experience confirms the importance of faculty having internalized this particularly foundational threshold concept and having made the associated shifts in identity as a prerequisite for both attaining other threshold concepts (such as reciprocity) associated with learning to teach, learn, serve, partner, and generate knowledge through service-learning and inquiring into threshold experiences.

The importance of faculty development to support faculty as learners logically follows. Referring to students who struggle to grasp disciplinary knowledge, Cousin (2010) notes that “some just give up and leave university altogether” and suggests that including students “in a dialogue about their difficulties ... dramatically reduces these possibilities, particularly if the teacher gives them full permission to flounder, fail and forget” (p. 4). Perhaps similar dynamics hold with faculty. How many faculty flounder and fail when trying to implement service-learning? Do they give up too quickly, not recognizing that being in a liminal space, perhaps even being stuck there for a time, is an important part of the potentially transformative process of teaching and learning with service-learning? Knowing that the process of learning the pedagogy involves threshold concepts (i.e., troublesome knowledge and troubling experiences) and is thus often and not surprisingly difficult might make their learning process less frustrating. Analogous to Cousin's suggestion regarding students, developing

processes through which faculty reflect on and collaboratively inquire into their own learning challenges could likewise support and retain them as they journey through liminal spaces.

Tilley-Lubbs's vignette provides an example of the importance of faculty becoming familiar with the literature on service-learning, which can be a key role for faculty developers; but it also highlights the potential limitations of engaging with readings in a way that is dissociated from critical reflection on experience. Faculty developers can support instructors in making meaning of experience in light of content in two key ways (Harrison & Clayton, 2012): (a) designing professional development that immerses faculty in service-learning as students themselves and thereby engages them in examining service experiences through the lens of the content and/or (b) encouraging and perhaps guiding faculty in examining their actual teaching with service-learning through the lens of the content. Autoethnography may be an especially powerful approach to the latter. Integrating practice and inquiry, it may serve as a tool for integrating theory, experience, and critical reflection, thereby advancing both faculty learning of threshold concepts in service-learning and theory about how faculty (and others) in service-learning learn them.

Autoethnography encourages practitioner-scholars to pay "reflexive and imaginative attention to everyday lived experience" (Gannon, 2006, p. 479) in ways that "locate the particular experiences of individuals in a tension with dominant expressions of discursive power" (Neumann, 1996, p. 189, in Holman Jones, 2005, p. 765). It is writing that connects the autobiographical and personal to the cultural and social" (Ellis, 2004, p. xix). Allowing stories to serve as the vehicle for interpretations that theorize, analyze, and explain (Richardson, 1997), autoethnographic writing can serve as a crucible that transforms understanding and practice insofar as it calls the writer's (in this case, the service-learning instructor's) attention to the ways in which her practice is shaped and constrained by the assumptions of the surrounding cultural context and by associated dynamics of power and privilege. For our purposes here, in keeping with Richardson and St. Pierre's (2005) description of "writing as a method of inquiry" (p. 959), autoethnography can be used by faculty as a vehicle for meta-critical reflection on the counternormative experience of teaching with service-learning, helping them to better understand the sources and significance of their own learning challenges and successes and making visible to them the evolution of their own thinking and practice. As the autoethnographer writes, often examining her own previous reflective writing (e.g., a teaching journal),

she comes to see patterns in her thinking and her practice and is better able to critique both. She is thus able to better align her knowledge and beliefs with her practice, grounded in an evolving understanding of why she does what she does and how, in doing it, she reifies and/or problematizes the structures and systems within which she operates. Further, since this approach to inquiry honors the knowledge-generating potential of critical reflection on experience, using it may help affirm for faculty the value of such critical reflection as an aid to better understanding and improved practice—on their own and their students' part—in this and other innovative, challenging, and dissonance-filled pedagogies.

A research method that regards the researcher as a participant in the research process and that enables theory to emerge from "look[ing] at experience analytically" (personal interview with Allen, in Ellis et al., 2011, para. 4), autoethnography can reveal the threshold nature of threshold concepts and inform theorizing about threshold experiences that teaching with service-learning may catalyze. Whether used contemporaneously or retrospectively, as in the case of the vignette, autoethnography may well provide an important response to a major gap in threshold concept work: that it "does not have a settled methodological framework" (Cousin, 2010, p. 7).

Issues for Further Inquiry

As with work on faculty learning in service-learning, the development of theory on threshold concepts is still in its infancy. Here we propose several questions that seem particularly important for ongoing inquiry in the arena of faculty learning about service-learning. The special issue of the *Journal of Faculty Development* on threshold concepts in educational development edited by King and Felten (2012a) begins an investigation of the threshold concepts associated with learning a wide range of innovative pedagogies. Wilcox and Leger (2013), in their piece on threshold concepts associated with teaching and learning in higher education, state that identifying threshold concepts associated with pedagogies is perhaps more difficult than doing so within a discipline and that there is much value in such examination. We are intrigued by the question of whether there are threshold concepts that are common to multiple non-traditional pedagogies and call for ongoing inquiry within and beyond service-learning into the processes by which such concepts are learned.

Timmermans (2010) comments that the processes of transition that lead to attainment of a threshold concept "remain nebulous" and that "understanding them is crucial" (p. 3), which we suggest points to the need for more inquiry into the threshold experiences as a key way to learn threshold concepts. Land and

colleagues (2010) point to the work of Mezirow (1990) and Kegan (1982) as they explore connections between threshold concept thinking and work on transformation and metamorphosis, and we recommend further integration of recent work on transformational learning as a next step in advancing theory related to faculty learning about service-learning through threshold experiences. Particularly relevant to service-learning, Cranton (2006) suggests that transformational learning is aided by “authentic relationships” such as occur when teachers and students “choose to act so as to foster the growth and development of each other’s being” and that everyone involved can thereby experience such learning (p. 7). Of particular significance for faculty learning in service-learning and to our knowledge as of yet uninvestigated are possibilities for co-learning of threshold concepts by service-learning partners engaged in such partnerships. Might learning threshold concepts in service-learning be better understood if undertaken collaboratively with partners encountering troublesome knowledge and having troubling experiences together? Relatedly, we encourage investigation of the question of whether the threshold concepts associated with learning about service-learning hold for all partner categories (i.e., students, faculty/staff, community members): Are there some concepts that are more likely to function as threshold for some partners than for others?

The threshold concepts literature acknowledges variation in student movement through this process, noting that some learners get stuck in the learning process, failing to grasp the threshold concepts, while others attain an understanding of them with relative ease (Meyer & Land, 2003, 2005). We assume the same holds for faculty pedagogical learning. One related point of entry into investigation of faculty learning threshold concepts in service-learning is the question Clayton and colleagues (2013) ask: “What are the similarities and differences between the processes by which faculty learn in their discipline and those by which they learn about service learning and community engagement?” (p. 267). Another is the unresolved question in the threshold concept literature of whether, in light of differences in the level of difficulty faced in learning them, the threshold nature of these concepts is inherent in the concepts themselves. As noted by the Elon conference concurrent session participants, along these lines, faculty do not all experience service-learning as troublesome, at least not in exactly the same ways; some faculty may learn the threshold concepts of reciprocity or critical reflection in service-learning relatively quickly while others may take years to cross these thresholds and still others may never do so. Given such variation, Cousin (2006) suggests that “the difficulty cannot be

abstracted from the learner or the social context” (p. 4). Perhaps the threshold nature of the concepts emerges from the interaction between a particular learner and the discipline or pedagogy. We wonder if at least some of the characteristics proposed for threshold concepts (e.g., reconstitutive, transformative) might, in fact, be features not of the concepts themselves but rather of the threshold experiences that lead to learning them. The example documented in the vignette provides support for a model of complex interaction between the self, the concept in question, the broader social and cultural environment, and the details of the particular threshold experience (including its associated critical reflection process).

Meyer (2012) posits that variation in how and when learners cross the thresholds necessary for understanding these concepts may be due to their current knowledge, their previous experience, and their disciplinary background. Schwartzman (2010) intriguingly suggests another dynamic that may underlie differences in the process of engaging with threshold concepts: When troublesome knowledge “initiates a rupture in knowing,” the learner’s response may be one of other “reflectiveness” or “defensiveness,” (p. 36) with the latter “shield[ing] the responder from having to experience the estrangement and engendered unease and uncertainty” (p. 34). Tilley-Lubbs’s examination of her journey to understanding reciprocity provides an example of and perhaps further insight to such complexities in the process of learning threshold concepts. While she registered the issue her students were raising, instead of engaging with it or them she became irritated and defensive, moving into reflectiveness much later, during her dissertation defense. As a doctoral student whose dissertation research was connected to the course, who felt the need to prove the pedagogy to colleagues and to the institution, and who had a fairly traditional orientation to the institutionalized power structures of the academy, she was primed for a defensive response to the students’ criticism. Further inquiry is needed into such issues as the full range of responses to troublesome knowledge (possibly in addition to reflectiveness and defensiveness), the factors that shape such responses, and the interventions that might encourage embracing rather than resisting the catalysts to threshold experiences.

Land and colleagues (2005) note that the process of coming to comprehend threshold concepts may include the learner “recursively” going back and forth within the liminal phase, in a state of partial understanding, before ultimately crossing the threshold or coming to understand the new way of thinking or being (Land et al., p. xi). The extended nature of Tilley-Lubbs’s journey, which we do not suggest is necessarily characteristic of learning threshold con-

cepts, raises the question of whether the *postliminal* phase may be characterized by ongoing oscillation as the threshold nature of a concept persists (i.e., if the threshold concept has been learned at one level but not at all levels). This possibility is seemingly in contrast with Land and colleagues' (2010) depiction of the process of learning a threshold concept, which appears to suggest that the back-and-forth process of liminality ends when the postliminal phase begins. Tilley-Lubbs continues to experience herself crossing thresholds in her understanding of reciprocity as she encounters additional instances of unsettledness with her students and community partners that are somewhat similar to the first but sufficiently different to expose her to new dimensions of the reciprocity concept. According to Butin (2010) service-learning can be undertaken with the intention of using it to disrupt current knowledge, and it can invite complex responses and ongoing questioning. Service-learning practitioner-scholars may be especially inclined toward an epistemology in which knowledge construction is never finished or complete; certainly in Tilley-Lubbs's case, valuing what Lather (1998) refers to as a "praxis of not being so sure" (para. 4) may explain why, for her, the concept of reciprocity—and, for that matter, any threshold concept—will never be fully "mastered." It is thus possible that liminality in the context of service-learning encourages the recursiveness of the process of learning such concepts to persist rather than it being a time-limited space through which one moves in the learning journey. If so, faculty remaining in a state of liminality might be desirable, and there might need to be more of a focus on an ongoing learning process in service-learning than is currently characteristic of the threshold concepts literature. Regardless of whether liminality is a temporary phase brought to an end by crossing a threshold or an ongoing state, we agree with Wilcox and Leger (2013) that intellectual and emotional work continues as one considers the implications of new perspectives; and we suggest that further work needs to be done to determine how best to support faculty (and other) learners as they learn and continue to deepen their understanding of service-learning's threshold concepts.

Finally, work on democratic engagement (Saltmarsh, Hartley, & Clayton, 2009) highlights the ways in which threshold concept theory tends to position faculty as experts in a discipline, investigating the difficulties students face in learning their subject matter—a technocratic orientation that reinforces hierarchy between teachers and learners to the detriment of both knowledge construction and democracy. Meyer and Land (2003) acknowledge that positing the existence of certain concepts as threshold concepts "might be interpreted as part of a

'totalising' or colonizing view of the curriculum" and suggest that "*Whose* threshold concepts then becomes a salient question" (p. 10). A democratic framing would suggest both the salience of threshold concepts in faculty learning as well as in student learning and the value of co-inquiry into what they are and how they are learned. Werder, Thibou, and Kaufer (2012) suggest that students can and should be co-inquirers in efforts to identify threshold concepts in the disciplines, and Barradell (2012) points to a need to involve "stakeholders beyond the immediate teaching and learning environment" (p. 273) in studies of threshold concepts. Collaborative inquiry by practitioner-scholars from all partner categories within and across each of the fields of service-learning and threshold concepts could yield new insights into the dynamics of co-learning and co-generation of knowledge.

Conclusion

Meyer and Land's body of work illuminates the potentially dissonant experience of learning concepts that are threshold in a discipline. Cousin (2009) highlights the importance of their work on threshold concepts throughout higher education, claiming that "the grasp of any subject ... is likely to involve turning points that both deepen our understanding and bond us more closely to the subject" (p. 202). In this article we have sought to extend their thinking, considering how it might provide a valuable analytic lens for understanding the potentially troublesome and transformative journey many faculty experience as they learn how to teach, learn, serve, partner, and generate knowledge through service-learning. We see this work as being helpful to educational developers looking to support faculty, especially those who may struggle, as they adopt service-learning; to administrators seeking to involve more faculty in nontraditional pedagogies such as service-learning; to faculty critically reflecting on their own practice, perhaps through a method such as autoethnography; and to scholars investigating learning and co-learning by faculty and other partners in service-learning.

Grounded in the use of critical reflection on experience to generate learning, service-learning theory and practice are well suited to contribute to the development of threshold concept theory, in turn, enhancing the utility of this body of work for understanding and advancing faculty learning in service-learning. Saltmarsh (2010) writes of service-learning that "changing pedagogy changes everything" (p. 332). One of the many arenas of change, as we have seen through this exploration of threshold concepts and threshold experiences, are the educators themselves. Shifting their pedagogy confronts faculty with the need—indeed, the opportunity—to learn; and that

learning may well be such that their very identities as educators are transformed. It has been suggested that “as with students, the learning that faculty undertake can be—and perhaps often is—transformational, not only for themselves but for the organizations and systems of which they are a part” (Clayton et al., 2013, p. 248). Theory related to threshold concepts and threshold experiences can guide inquiry into the processes whereby such transformation occurs.

Notes

¹ Throughout this article, the term “faculty” refers to all instructors, including professional staff and administrators who teach with service-learning as well as faculty members.

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References

- Ash, S. L., & Clayton, P. H. (2009). Generating, deepening, and documenting learning: The power of critical reflection for applied learning. *Journal of Applied Learning in Higher Education*, 1(1), pp. 25-48.
- Barradell, S. (2012). The identification of threshold concepts: A review of theoretical complexities and methodological challenges. *Higher Education*, 65, 265-276.
- Bringle, R. G., & Clayton, P. H. (2012). Civic education through service-learning: What, how, and why? In L. McIlraith, A. Lyons, & R. Munck (Eds.). *Higher education and civic engagement: Comparative perspectives* (pp. 101-124). New York: Palgrave Macmillan.
- Bringle, R. G., Clayton, P. H., & Hatcher, J. A. (2013). Research on service learning: An introduction. In P. H. Clayton, R. G. Bringle, & J. A. Hatcher, (Eds.). *Research on service learning: Conceptual frameworks and assessment*. (Vol. 2A, pp. 3 - 25). Sterling, VA: Stylus.
- Bunnell, S. L., & Bernstein, D. J. (2012). Overcoming some threshold concepts in scholarly teaching. *Journal of Faculty Development*, 26(3), 14-18.
- Butin, D. (2010). *Service-learning in theory and practice: The future of community engagement in higher education*. New York: Palgrave Macmillan.
- Clayton, P. H., & Ash, S. L. (2004). Shifts in perspective: Capitalizing on the counter-normative nature of service-learning. *Michigan Journal of Community Service Learning*, 11(1), 59-70.
- Clayton, P. H., Hess, G., Jaeger, A., Jameson, J., & McGuire, L. (2013). Investigating faculty learning in service learning: Theoretical frameworks and research. In P. H. Clayton, R. G. Bringle, & J. A. Hatcher (Eds.), *Research on service learning: Conceptual frameworks and assessment* (Vol. 2A, pp. 245 - 278). Sterling, VA: Stylus.
- Cousin, G. (2006). An introduction to threshold concepts. *Planet*, 17(December), 4-5. Retrieved from <http://www.gees.ac.uk/planet/p17/gc.pdf>
- Cousin, G. (2009). *Researching learning in higher education*. New York: Routledge.
- Cousin, G. (2010). Neither teacher-centred nor student-centred: Threshold concepts and research partnerships. *Journal of Learning Development in Higher Education*, February(2), 1-9.
- Cranton, P. (2006). Fostering authentic relationships in the transformative classroom. *New Directions for Adult and Continuing Education*, 2006(109), 5-13.
- Dewey, J. (1998/1933). Analysis of reflective thinking: How we think. In L. A. Hickman & T. M. Alexander (Eds.), *The essential Dewey, Volume 2: Ethics, logic, psychology* (pp. 137-144). Bloomington, IN: Indiana University Press.
- Dewey, J. (1997/1938). *Experience and education*. New York: Touchstone.
- Dostilio, L. D., Brackmann, S. M., Edwards, K. E., Harrison, B., Klierer, B. W., & Clayton, P. H. (2012). Reciprocity: Saying what we mean and meaning what we say. *Michigan Journal of Community Service Learning*, 19(1), 17-32.
- Ellis, C. (2004). *The ethnographic I: A methodological novel about autoethnography*. Walnut Creek, CA: Rowman Altamira.
- Ellis, C., Adams, T. E., & Bochner, A. P. (2011). Autoethnography: An overview. *Forum Qualitative Social Research*, 12(1). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/1589/3095>
- Furco, A. (1996). Service-learning: A balanced approach to experiential education. In B. Taylor (Ed.), *Expanding boundaries: Serving and learning* (pp. 2- 6). Washington, DC: Corporation for National and Community Service.

- Gannon, S. (2006). The (im)possibilities of writing the self-writing: French poststructural theory and autoethnography. *Cultural Studies <=>Critical Methodologies*, 6(4), 474-495.
- Giles, H. C. (2014). Risky epistemology: Connected knowing and dissonance in conflict-oriented community-based research. *Michigan Journal of Community Service Learning*, 20(2), 65-78.
- Harrison, B., & Clayton, P. H. (2012) Reciprocity as a threshold concept for faculty who are learning to teach with service-learning. *Journal of Faculty Development*, 26(3), 29-33.
- Holman Jones, S. (2005). Autoethnography: Making the personal political. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed.) (pp. 763-791). Thousand Oaks, CA: SAGE.
- Howard, J. (1998). Academic service learning: A counter-normative pedagogy. In R. Rhoads & J. Howard (Eds.), *Academic service learning: A pedagogy of action and reflection* (pp. 21-29). San Francisco: Jossey-Bass.
- Howard, J. (2001). *Service-learning course design workbook*. Ann Arbor, MI: OCSL Press.
- Jameson, J. K., Clayton, P. H., & Jaeger, A. J. (2011). Community engaged scholarship as mutually transformative partnerships. In L. Harter, J. Hamel-Lambert, & J. Millesen (Eds.), *Participatory partnerships for social action and research* (pp. 259-277). Dubuque, IA: Kendall Hunt.
- Kegan, R. (1982). *The evolving self: Problem and process in human development*. Cambridge, MA: Harvard University Press.
- Kiely, R. (2005). A transformative learning model for service-learning: A longitudinal case study. *Michigan Journal of Community Service Learning*, 12(1), 5-22.
- King, C., & Felten, P. (Eds.). (2012a). Threshold concepts in educational development [Special issue]. *Journal of Faculty Development*, 26(3).
- King, C., & Felten, P. (2012b). Threshold concepts in educational development: An introduction. *Journal of Faculty Development*, 26(3), 5-7.
- Land, R. (2011a, August). *Threshold concepts and troublesome knowledge: A transformative approach to learning*. Keynote address at Elon University Teaching and Learning Conference, Elon, NC.
- Land, R. (2011b). There could be trouble ahead: Using threshold concepts as a tool of analysis. *International Journal for Academic Development*, 16(2), 175-178.
- Land, R., Cousin, G., Meyer, J. H. F., & Davies, P. (2005). Threshold concepts and troublesome knowledge (3): Implications for course design and evaluation. In C. Rust (Ed.), *Improving student learning diversity and inclusivity* (pp. 53-64). Oxford: Oxford Centre for Staff and Learning Development.
- Land, R., Meyer, J. H. F., & Baillie, C. (2010). Editors' preface: Threshold concepts and transformational learning. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. viii-xiii). Rotterdam, Netherlands: Sense.
- Lather, P. (1998). Critical pedagogy and its complicities: A praxis of stuck places. *Educational Theory*, 48(4), 487-497.
- Meyer, J. H. F. (2012). 'Variation in student learning' as a threshold concept. *Journal of Faculty Development*, 26(3), 8-13.
- Meyer, J. H. F., & Land, R. (2003). *Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines*. (Occasional No. 4). Edinburgh: Enhancing Teaching-Learning Environments in Undergraduate Courses Project, Higher and Community Education, School of Education, University of Edinburgh.
- Meyer, J. H. F., & Land, R. (2005). Threshold concepts and troublesome knowledge (2): Epistemological considerations and a conceptual framework for teaching and learning. *Higher Education*, 49, 373-388.
- Meyer, J. H. F., & Land, R. (2006). Threshold concepts and troublesome knowledge issues of liminality. In J. H. F. Meyer & R. Land (Eds.), *Overcoming barriers to student understanding: Threshold concepts and troublesome knowledge*. (London ed., pp. 19-32). London: Routledge.
- Mezirow, J. (1990). How critical reflection triggers transformative learning. In J. Mezirow & Associates (Eds.), *Fostering critical reflection in adulthood*. San Francisco: Jossey-Bass.
- Neumann, A. (2005). Observations: Taking seriously the topic of learning in studies of faculty work and careers. *New Directions for Teaching and Learning* (102) (pp. 63-83). San Francisco: Jossey-Bass.
- O'Meara, K. (2013). Research on faculty motivations for service learning and community engagement. In P. H. Clayton, R. G. Bringle, & J. A. Hatcher (Eds.), *Research on service learning: Conceptual frameworks and assessment* (Vol. 2A, pp. 215-243). Sterling, VA: Stylus.
- Richardson, L. (1997). *Fields of play: Constructing an academic life*. New Brunswick, NJ: Rutgers University Press.
- Richardson, L., & St. Pierre, E.A. (2005). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 959-978). Thousand Oaks, CA: SAGE.
- Saltmarsh, J. (2010). Changing pedagogies. In H. E. Fitzgerald, C. Burack & S. D. Seifer (Eds.), *Handbook of engaged scholarship: Contemporary landscapes, future directions* (Vol. 1, pp. 331-352). East Lansing, MI: Michigan State University Press.
- Saltmarsh, J., Hartley, M., & Clayton, P. H. (2009). *Democratic engagement white paper*. Boston: New England Resource Center for Higher Education.
- Schwartzman, L. (2010). Transcending disciplinary boundaries: A proposed theoretical foundation for threshold concepts. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. 21-44). Rotterdam, Netherlands: Sense.
- Tilley-Lubbs, G. A. (2003). *Crossing the border through service-learning: A study in cross-cultural relationships*. (Unpublished doctoral dissertation). Virginia Tech, Blacksburg, VA.

- Tilley-Lubbs, G. A. (2009a). Good intentions pave the way to hierarchy: A retrospective autoethnographic approach. *Michigan Journal of Community Service Learning*, 16(1), 59-68.
- Tilley-Lubbs, G. A. (2009b). Troubling the tide: The perils and paradoxes of service-learning in immigrant communities. *International Journal of Critical Pedagogy*, 2(1), 67-87.
- Timmermans, J. A. (2010). Changing our minds: The developmental potential of threshold concepts. In J. H. F. Meyer, R. Land, & C. Baillie (Eds.), *Threshold concepts and transformational learning* (pp. 3-19). Rotterdam, Netherlands: Sense.
- Werder, C., Thibou, S., & Kaufer, B. (2012). Students as co-inquirers: A requisite threshold concept in educational development? *Journal of Faculty Development*, 26(3), 34-38.
- Wilcox, S., & Leger, A.B. (2013). Crossing thresholds: Identifying conceptual transitions in postsecondary teaching. *The Canadian Journal for the Scholarship of Teaching and Learning*. 4(2). Retrieved from http://ir.lib.uwo.ca/cjsotl_rcacea/vol4/iss2/7/
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